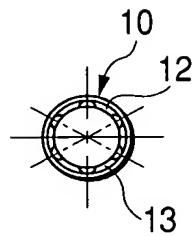
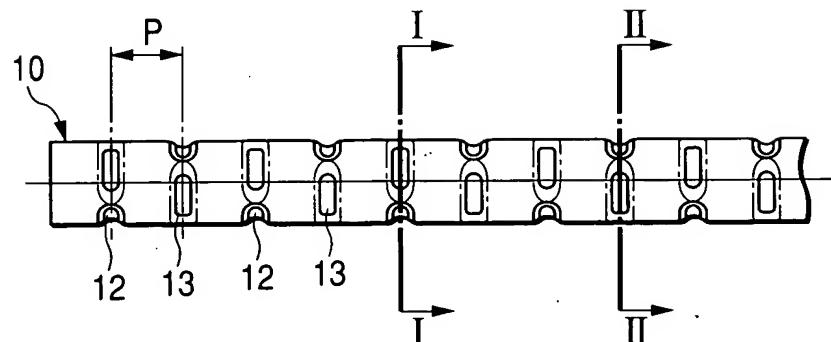




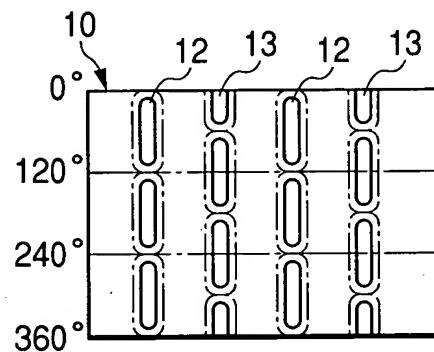
**FIG. 1A**



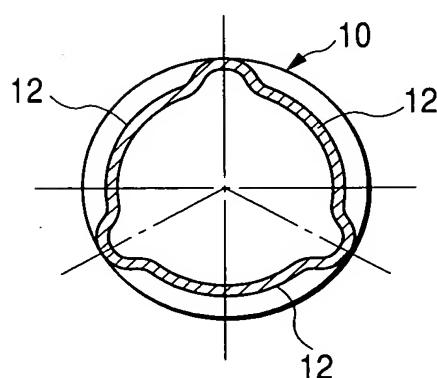
**FIG. 1B**



**FIG. 1C**

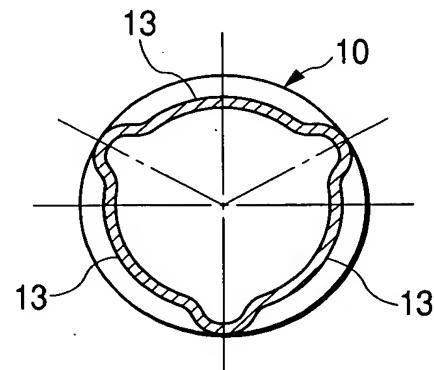


**FIG. 2A**



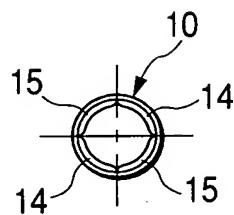
CROSS SECTION I-I

**FIG. 2B**

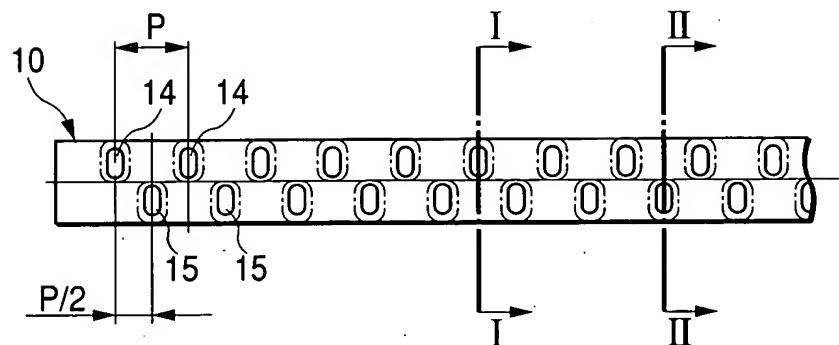


CROSS SECTION II-II

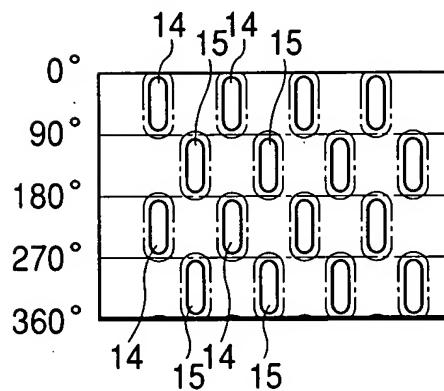
**FIG. 3A**



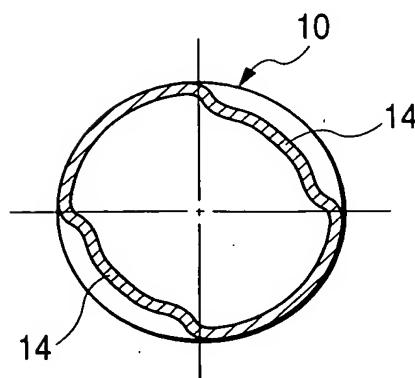
**FIG. 3B**



**FIG. 3C**

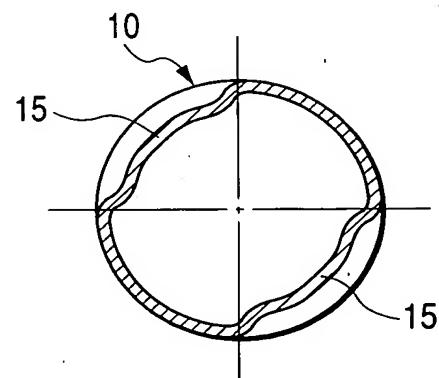


**FIG. 4A**



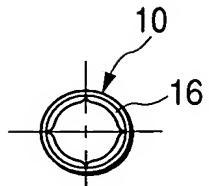
CROSS SECTION I-I

**FIG. 4B**

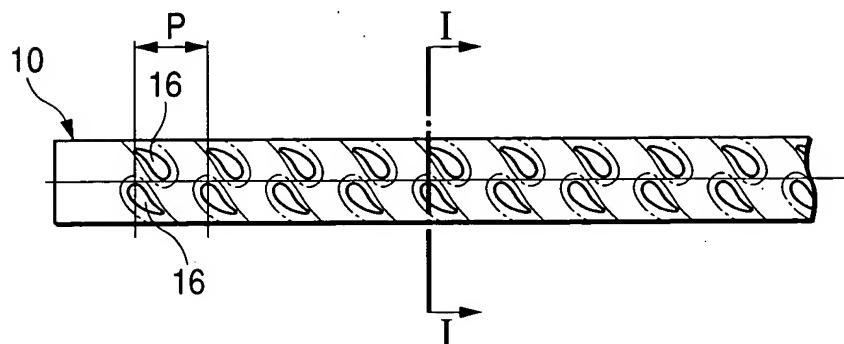


CROSS SECTION II-II

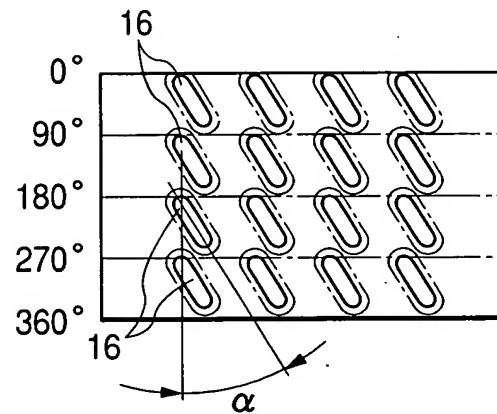
**FIG. 5A**



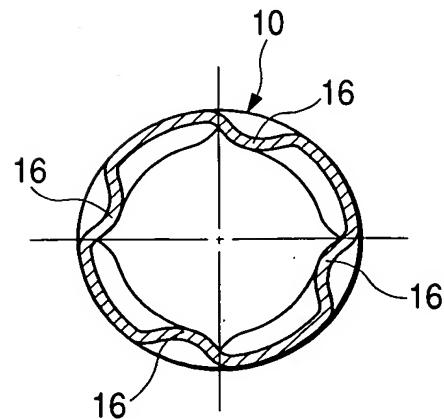
**FIG. 5B**



**FIG. 5C**

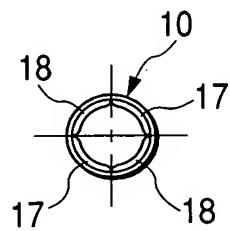


**FIG. 6**

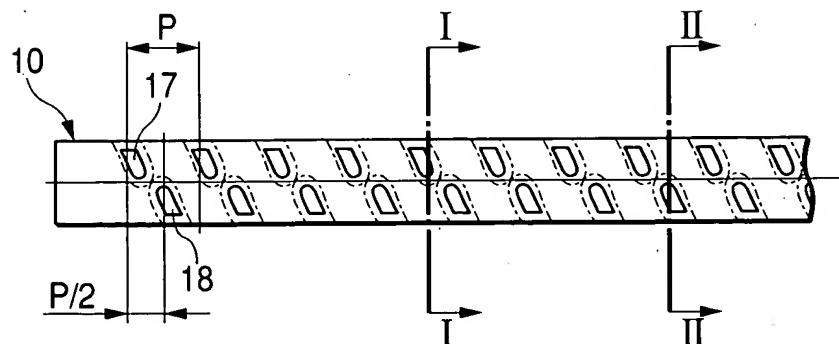


CROSS SECTION I-I

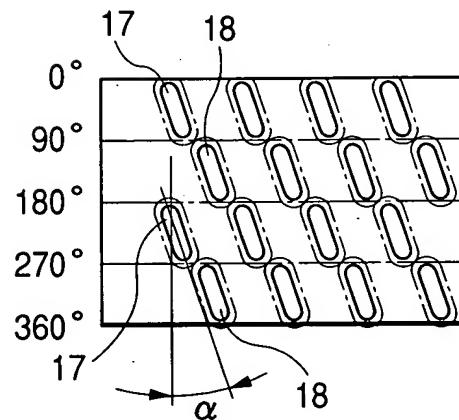
**FIG. 7A**



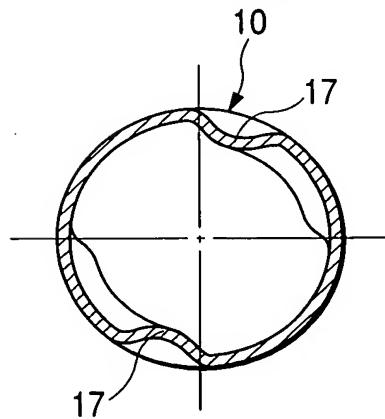
**FIG. 7B**



**FIG. 7C**

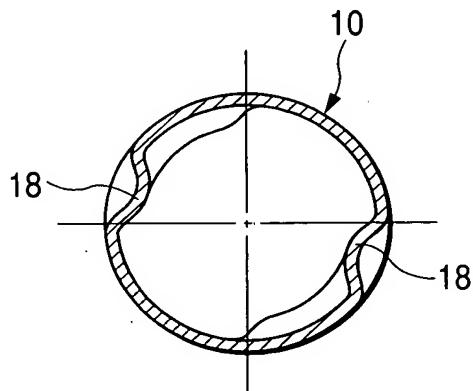


**FIG. 8A**



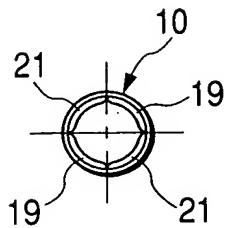
CROSS SECTION I-I

**FIG. 8B**

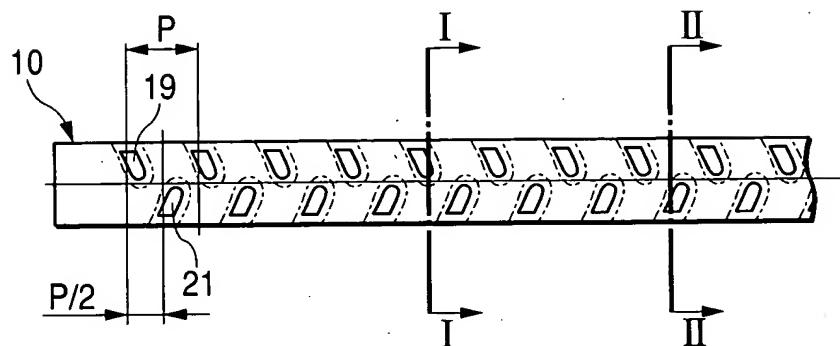


CROSS SECTION II-II

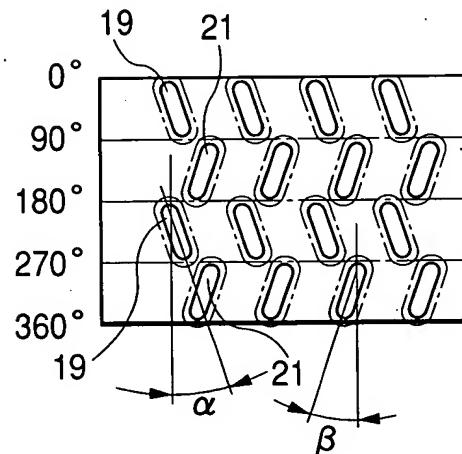
**FIG. 9A**



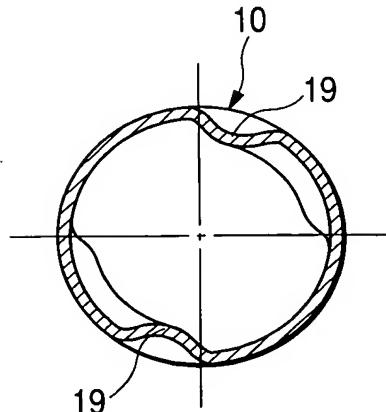
**FIG. 9B**



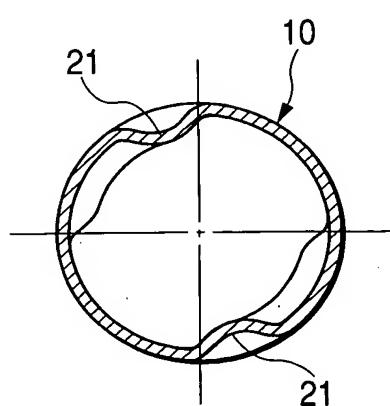
**FIG. 9C**



**FIG. 10A**

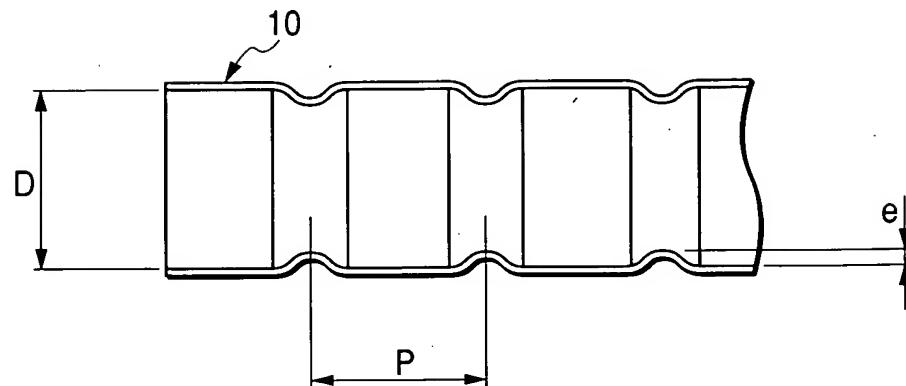


**FIG. 10B**



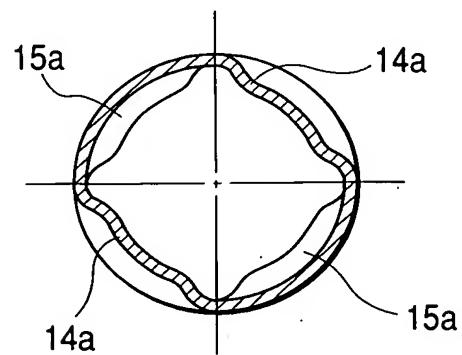
6 / 9

*FIG. 11*

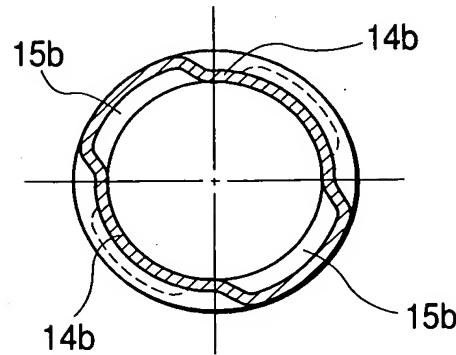


D ; INNER DIAMETER OF TUBE	5mm TO 30mm
e ; BEAD HEIGHT	0.05D TO 0.2D
P ; BEAD PITCH	6e TO 25e

*FIG. 12*



**FIG. 13**



**FIG. 14**

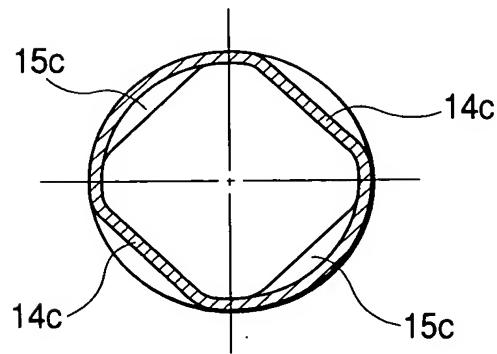
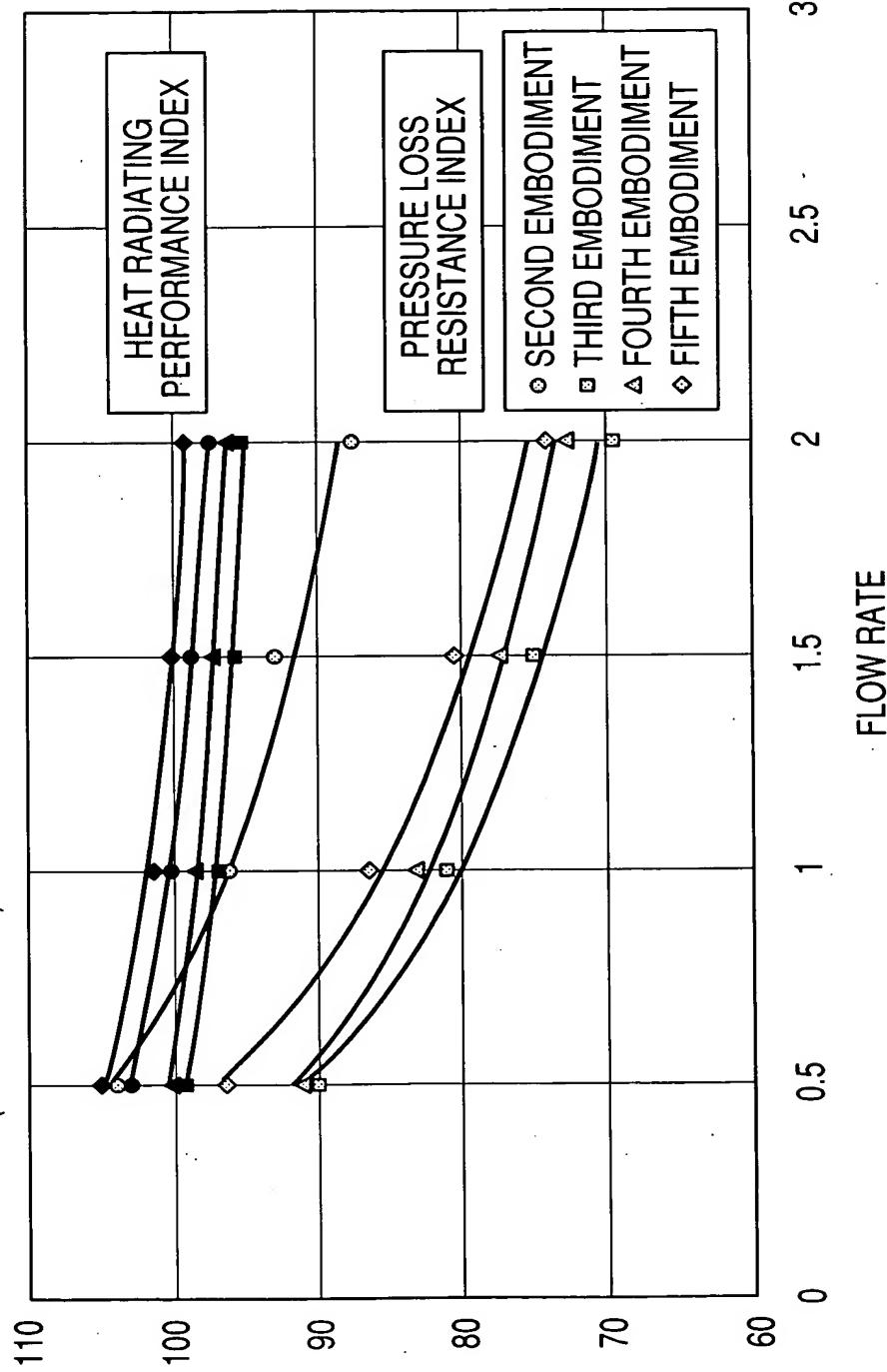


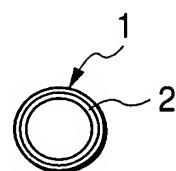
FIG. 15

HEAT RADIATING PERFORMANCE AND PRESSURE LOSS RESISTANCE INDEX OF  
TUBE OF EMBODIMENT IN THE CASE WHERE TWO - DIMENSIONAL PROTRUSION  
TUBE (RELATED ART) IS SET AT 100

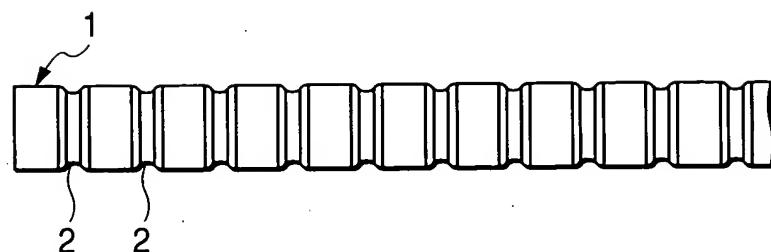


HEAT RADIATING PERFORMANCE AND  
PRESSURE LOSS RESISTANCE INDEX

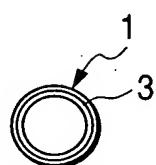
**FIG. 16A**



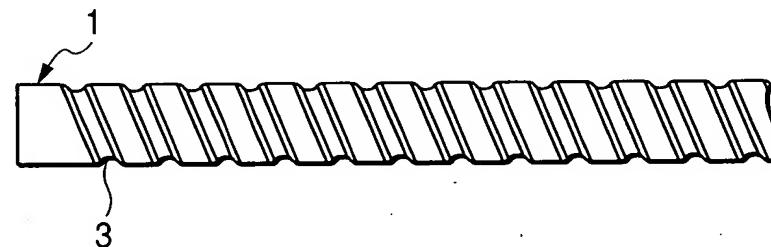
**FIG. 16B**



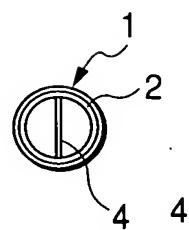
**FIG. 17A**



**FIG. 17B**



**FIG. 18A**



**FIG. 18B**

